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# .NET PROGRAMMING

## LAB-6

**IN-LAB:**

Task1:Develop a MyExtension class, which declares the following extension methods:

- the **SummaDigit** method, which extends the Int32 type and returns the sum of the digits of an arbitrary integer.

```
Example 1: n = 1274   result = 14 (14 = 1 + 2 + 7 + 4)
```

- the **SummaWithReverse** method, which extends the UInt32 type and returns the sum of the original positive integer with the number obtained from the original by rearranging all digits in reverse order

```
Example 2: n = 132    result = 363 (363 = 132 + 231)
```

- the **CountNotLetter** method, which extends the String type and returns the number of characters in the string that are not Latin letters.

```
Example 3: s = "I like C#"   result = 3 (there are two spaces and a "sharp"
character in the line)
```

- the **IsDayOff** method, which extends the DayOfWeek type and returns the boolean value true if it is a weekend (Saturday or Sunday) or the boolean value false if it is a weekday.

```
Example 4: day = DayOfWeek.Sunday  result = true
```

- the **EvenPositiveElements** method, which extends the IEnumerable <int> type and returns only even positive numbers from a set of integers

```
Example 5: int[] mas = { 2, -2, 3, 4, 0, 6, 1, 9 }    result =  2 , 4, 6
Example 6: for List<int> list = new List<int>{ 2, 3, -4, 8, 5, 4 }   result
= 2, 8, 4
```

```
class Program
{
    static void Main()
    {
        int n1 = 1274;
        Console.WriteLine($"Sum of digits of {n1}: {n1.SummaDigit()}");
        Console.WriteLine($"Sum of {n2} with its reverse:
{n2.SummaWithReverse()}");
        string s = "I like C#";
        Console.WriteLine($"Count of non-letter characters in \"{s}\":
{s.CountNotLetter()}");
```

```
        DayOfWeek day = DayOfWeek.Sunday;
        Console.WriteLine($"Is {day} a day off? {day.IsDayOff()}");
        int[] array = { 2, -2, 3, 4, 0, 6, 1, 9 };
        Console.WriteLine("Even positive elements in array:");
        foreach (var item in array.EvenPositiveElements())
        {
            Console.Write($"{item} ");
        }
        Console.WriteLine();
        List<int> list = new List<int> { 2, 3, -4, 8, 5, 4 };
        Console.WriteLine("Even positive elements in list:");
        foreach (var item in list.EvenPositiveElements())
        {
            Console.Write($"{item} ");
        }
        Console.WriteLine();
    }
}
```